Soviet Physics Journal 1983 vol.26 N11, pages 994-998

Optical and magnetooptical properties of manganese-zinc ferrospinels

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Abstract

The use of optical methods for the investigation of the electronic structure of oxide ferrimagnets is complicated by the large variety of possible types of electron transitions whose energies are close to each other and lie in the near infrared, visible, and near ultraviolet regions of the spectrum. Therefore, for the correct identification of the transitions, it is desirable to apply traditional optical spectroscopy, which permits quantitative evaluation of the transition intensities (oscillator strength), in conjunction with magnetooptical (MO) methods providing information on weak intraconfigurational transitions which are not manifest in ordinary absorption or reflection spectra. © 1984 Plenum Publishing Corporation.

http://dx.doi.org/10.1007/BF00896658